

Worldwide Microcontroller Analysis

The tables and figures in this section are organized as follows:

- Table 1 Estimated Microcontroller Unit Shipments by Word Length, 1975-1986
Figure 1 Estimated Microcontroller Unit Shipments by Word Length, 1975-1986
Table 2 Estimated Market Share by Manufacturer for all Microcontrollers,
 1975-1980, 1981-1986
Figure 2 Estimated Market Share by Manufacturer for all Microcontrollers, for
 1985 and 1986
Table 3 Estimated Market Share by Region for all Microcontrollers, 1981-1986
Figure 3 Estimated Market Share by Region for all Microcontrollers, 1981-1986

Worldwide Microcontroller Analysis

Table 1

**Estimated Microcontroller
Unit Shipments by Word Length
1975-1986
(Thousands of Units)**

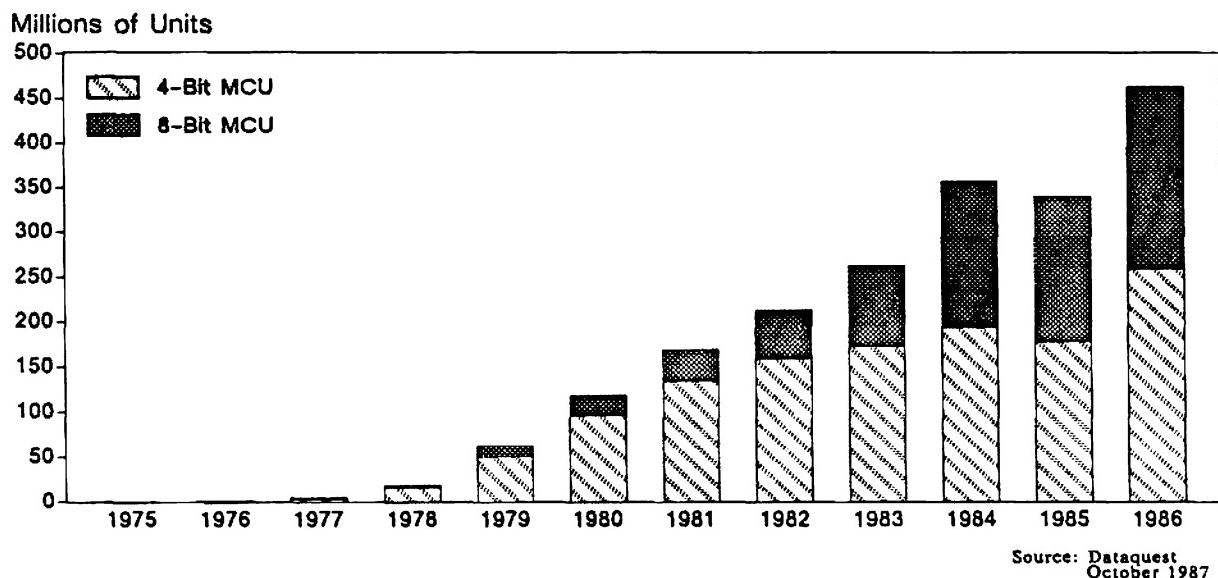
	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
4-Bit						
Shipments	500	760	3,400	15,959	50,525	96,080
Percent	93.98%	75.17%	79.35%	87.80%	81.33%	81.54%
8-Bit						
Shipments	32	251	885	2,218	11,592	21,740
Percent	6.02%	24.83%	20.65%	12.20%	18.66%	18.45%
16-Bit						
Shipments	—	—	—	—	5	8
Percent	—	—	—	—	0.01%	0.01%
Total Shipments	532	1,011	4,285	18,177	62,122	117,828
Percent	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
4-Bit						
Shipments	133,549	158,183	171,945	193,435	177,038	259,171
Percent	79.25%	74.49%	65.47%	54.17%	52.02%	55.90%
8-Bit						
Shipments	34,931	54,114	90,615	163,510	163,067	204,084
Percent	20.73%	25.48%	34.50%	45.79%	47.91%	44.02%
16-Bit						
Shipments	36	50	89	123	232	399
Percent	0.02%	0.03%	0.03%	0.03%	0.07%	0.09%
Total Shipments	168,516	212,347	262,649	357,068	340,337	463,654
Percent	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Dataquest
October 1987

Worldwide Microcontroller Analysis

Figure 1

Estimated Microcontroller Unit Shipments by Word Length 1975–1986



Worldwide Microcontroller Analysis

Table 2

Estimated Market Share by Manufacturer for all Microcontrollers 1975-1980

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
NEC				8.33%	14.14%	15.04%
Mitsubishi						
Matsushita					7.08	8.76
Toshiba						
National				12.79	9.03	10.02
Hitachi				2.26	1.05	1.21
Motorola				0.50	1.29	1.30
Texas Instruments	9.40%	30.66%	65.93%	51.71	42.02	37.35
Philips						0.02
Intel			2.45	2.86	4.22	5.03
Oki						0.08
Sharp					0.58	5.60
Thomson						
Fujitsu						0.54
Signetics					0.29	0.11
SGS						
General Instrument				2.48	6.60	4.75
Siemens						0.02
Others	<u>90.60</u>	<u>69.34</u>	<u>31.62</u>	<u>19.07</u>	<u>13.70</u>	<u>10.17</u>
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

(Continued)

Worldwide Microcontroller Analysis

Table 2 (Continued)

**Estimated Market Share by Manufacturer
for all Microcontrollers
1981-1986**

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
NEC	16.53%	20.49%	20.39%	23.75%	21.34%	19.22%
Mitsubishi					4.44	12.46
Matsushita	7.42	7.64	9.54	8.10	9.41	9.81
Toshiba	0.21	7.73	11.11	9.29	10.31	8.98
National	7.80	9.10	9.64	9.40	8.55	7.46
Motorola	2.99	4.52	6.53	6.41	7.81	7.26
Hitachi	11.57	10.55	9.26	8.23	8.86	7.01
Texas Instruments	23.47	12.39	4.84	2.63	1.58	4.01
Philips	0.22	0.60	1.37	2.89	3.52	3.96
Intel	4.96	5.48	6.18	7.60	4.43	3.87
Oki	0.33	1.23	2.48	2.46	2.67	2.66
Sharp	7.84	5.89	5.30	4.68	3.17	2.12
Thomson			0.06	0.99	1.97	1.82
Fujitsu	7.46	6.81	4.68	3.00	*	*
Signetics	0.00	0.08	0.81	2.15	1.91	1.30
SGS					**	1.17
General Instrument	2.45	1.98	2.52	2.65	2.19	1.15
Siemens	0.50	1.03	1.08	1.09	1.28	1.04
Others	<u>6.25</u>	<u>4.48</u>	<u>4.30</u>	<u>4.68</u>	<u>6.56</u>	<u>4.70</u>
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

*Consolidated with Others due to insufficient data.

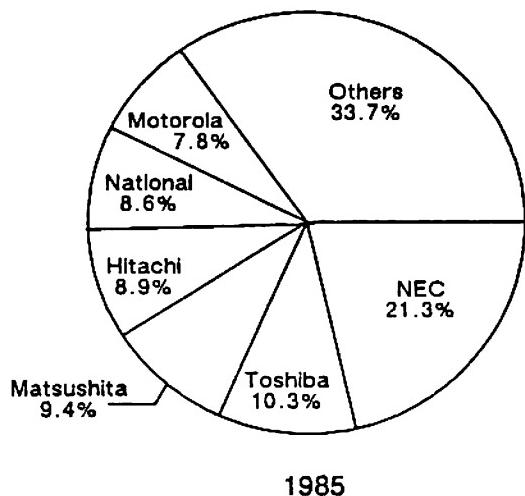
**Less than 1 percent in previous years and consolidated with Others.

Source: Dataquest
October 1987

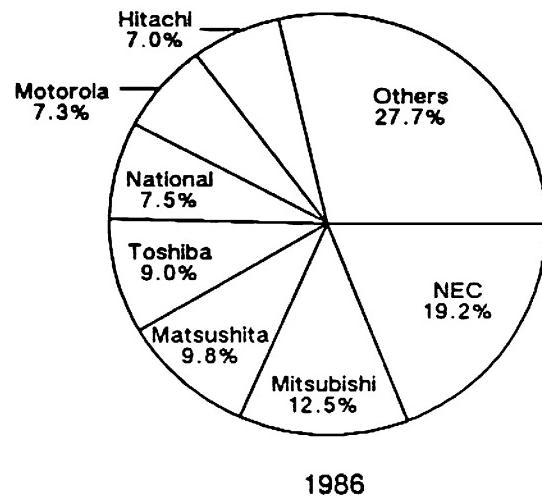
Worldwide Microcontroller Analysis

Figure 2

**Estimated Market Share by Manufacturer for all Microcontrollers
1985 and 1986**



1985



1986

**Source: Dataquest
October 1987**

Worldwide Microcontroller Analysis

Table 3

Estimated Market Share by Region for all Microcontrollers
1981-1986
(Thousands of Units)

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Europe						
Shipments	1,475	4,517	8,978	21,500	26,944	46,721
Percent	0.88%	2.13%	3.42%	6.00%	7.92%	10.08%
Japan						
Shipments	86,524	128,129	164,560	213,265	212,718	295,953
Percent	51.34%	60.34%	62.65%	59.52%	62.50%	63.83%
United States						
Shipments	80,517	79,701	89,111	123,545	100,675	120,980
Percent	47.78%	37.53%	33.93%	34.48%	29.58%	26.09%
Total Shipments	168,516	212,347	262,649	358,310	340,337	463,654
Percent	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Dataquest
October 1987

Worldwide Microcontroller Analysis

Figure 3

**Estimated Market Share by Region for all Microcontrollers
1981–1986**

